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AGRICULTURAL.

TREATISE

On the Cultivation of Sugar Beets and the Manufacture of Beet Sugar.

We have been favored with a perusal of the unbound sheets of a treatise on "the Culture of the Beet and Manufacture of Beet Sugar," by David Lee Child, of Northampton. This work is now in press and will soon be offered to the public by the publishers, Weeks, Jordan & Co., of this city.

The author has devoted three years to observations, study and experience, and now gives the results in a most acceptable time, when so many are inquiring for information on the subject. Mr Child spent a year and a half in the sugar factories of France, Belgium and Germany, and had during that time, free intercourse with cultivators and manufacturers, most distinguished for science and success, and has gathered together much that is important and necessary to prosecuting the business profitably in this country. The last year and a half has been spent in forming an experimental establishment, and making sugar at Northampton in this State. No person in the country is probably so well qualified as Mr Child, to treat upon this subject; and we have no doubt his labors will be duly appreciated by his countrymen. He has brought together in a clear and concise manner, all that seems essential to enlighten the judgment and direct the measures of American farmers in relation to this new and pleasant branch of rural economy.

The work is divided into three parts. The first part treats upon the culture of the beet—describing first, the species and varieties; the climate most propitious for it; soil best adapted for its cultivation, rotation, tillage and manure; descriptions and drawings used in cultivating the soil in France; sowing; weeding; digging; keeping; raising seed; produce and expense of the culture. Part second treats upon the manufacture of beet sugar, and cleaning the roots; grating, with description and figure of the instrument; pressing; defecation or 1st clarification; first filtration, evaporation or concentration; second filtration; second concentration; third filtration; boiling; filling; the curing room; re-boiling molasses; revivification of animal charcoal; miscellaneous observations; the Dombasle or macerating system; expenses of manufacturing; the manufacture of beet sugar at Northampton. The third part treats of the history and prospects of the business, &c.

A work of this kind has been long sought after, and we are happy in thus announcing its speedy appearance. The author has already manufactured 1500 lbs. of fine sugar, and is well satisfied that it will eventually prove a profitable business, and drive the imported sugars from the market. We hope his expectations will be realised, and trust they will. It cannot be expected, however, that there will be no obstacles in the way, or discouragement or failures to new beginners: it is a business to be learnt: some of its operations are nice, and will require knowledge, practice and patience on the part of the experimenter, before he succeeds in producing sugar to advantage.

The following chapter on soils suitable for the sugar beet, will show the importance of first testing the soil by raising a quantity of beets, before establishing a sugar beet factory, and ascertaining the quantity of sugar they contain, as it will be seen that some soils produce beets from which not a grain of sugar can be obtained, owing to some local peculiarity. J. B.

"Soil.—The best soil for the beet is a deep, rich, sandy, alluvial soil, with an open and fair exposition to the sun. But any soil which will answer for Indian corn, will answer for sugar beet. There is no land except the peaty or mossy, upon which it may not be tried with success. Strong, clayey and loamy lands will produce the greatest bulk of beets, if humidity does not too much predominate, but these beets will not necessarily yield a greater quantity of sugar than a much smaller quantity grown upon an equal extent of light and upland soil. The beet, however, is not ungrateful for a rich soil. Such an one is undoubtedly to be preferred, for although the juice will not be as rich, yet the superior quantity may be expected to more than make up the deficiency. As a general rule, a soil inclining to sandy is to be preferred. A clayey sand, is better than a sandy clay, provided the subsoil is tolerably retentive. There is danger from excess either of moisture or of dryness. A middling degree of moisture must be sought. The balance, if it incline either way, had better be in favor of the dry, inasmuch as the beet does not require a great deal of moisture except during a few weeks of the spring, when rains are usually frequent and abundant. After that its leaves shade the surface, and prevent rapid exhalation, while its long tap-root penetrates the earth and draws up fresh supplies as from a well.

Those who cultivate the beet largely for manufacturing, will do well to sow extensively on both low and upland. If the season prove either wet or dry, one of them will yield well,—if it be neither, both may yield well.

Calcareous soils are not unfriendly to the beet. A considerable proportion of the beet growing region of France is of this nature; and very fine crops of beets have been gathered from it, even where there was only three or four inches of vegetable earth resting on a bed of chalk. This species of soil uses up manure quicker than others.

A gravelly soil is not very good for the beet. The large tap-root, in penetrating the earth to get its food, encounters stones and pebbles, which retard its progress and split it into forks; then, in order that nourishment may be conveyed laterally, radicles, which are of little value, are multiplied. Still it must be admitted that the beet may flourish on gravelly soil; but it would be well to appropriate it to forage rather than to manufacturing. The stones, as far as practicable, should be removed.

Saline soils are to be eschewed, but they are considered favorable for beets designed for feeding and fattening cattle.

Soils too sandy may generally be amended with considerable facility. For the most part they rest upon a clayey bottom, five or six feet below the surface. This may be taken up, pulverised and mixed with great advantage. Clayey marls produce surprising effects on this soil, and favor in an eminent degree the growth and saccharification of the beet. Sandy, like calcareous soils, consume manure too quick.

It follows that stiff, cold, clayey land may be benefited by sand, but it ought to be mixed with lime and stable manure. Calcareous marls are also proper and perhaps preferable.

Calcareous soils of the heavier sort, may be benefited by the application of sandy loam. The lighter sort by clay and clayey marl. Gravelly soils may be improved by clayey loam; peaty soils, by draining, and by the application of coarse earth, common sand, sea sand, chalk and calcareous marl.

In all cases it will be prudent before establishing a beet sugar factory, to try the soil, by raising a quantity of beets, and ascertaining the proportion of sugar they contain. It has been found in several instances after erecting large works, that not a grain of sugar could be obtained, by reason of some local peculiarity."

THE WEST.

Gov. Hill, editor of the Farmer's Monthly Visitor, in reply to a correspondent recommending New Englanders to emigrate to the West, has the following just remarks:

"The cost of a journey to Michigan, to the valley of the Wabash, or to Wisconsin, to most New England men with a family, with the outfit necessary for his and their subsistence until he can procure a crop on the "cheap and fertile lands" to which he removes, will consume means to an amount sufficient to lay the foundation of his and their competence and independence in the neighborhood from which he started. The "mere pittance" derived from "incessant labor" in New England, will not be found so contemptible as some apprehend, when compared with the vast products of the West. No one expects that crops of corn and wheat will grow there without putting them into the earth: and it is at least a question with us whether a greater value from an equal amount of labor may not be derived from cultivation of the soil in New England than from the very best soil of the West. Men of capital there may cultivate their hundreds and their thousands of acres with the use only of teams of oxen and horses; but the value of the crops there, if raised to sell, is scarcely ever greater in proportion to the personal labor, than the lesser crops in quantity produced here. The poor man without capital can procure much more of the necessaries and comforts of life from tilling the soil or other labor here than he can there. Such a man, if he has credit to hire money sufficient for an outfit and to keep soul and body together until the first crop should be obtained in the "land of promise," would find himself embarrassed with this additional burden of debt sufficient to cripple and discourage him

for years, should he be so fortunate as to survive them: his children after him, if necessity should teach them to be industrious and enterprising, might live in that precise age of every new country that should be the most prosperous; and of course the chance would be increased that they might make themselves independent for life.

There are classes of people who, if they will venture the risque of diseases of the climate, may do well to emigrate to the West. Professional young men, lawyers, physicians, and perhaps clergymen, may stand a chance of more immediate introduction to business and of the promotion which results from success in a new and growing country than they can in an old. As there is more litigation and of course more misery in the one country than the other, so the lawyer will find most business; and as there are more fevers and agues, more sickness in such a place, so the physician will find more sure and profitable employment; and even the clergyman, if men and women could be driven to be more religious from the chance of sooner dying, would find greater inducements for his labors in the far west than he finds in this land overrunning with Christian ministers and churches.

Men with moderate farms, which cannot be advantageously subdivided, having families of some half a dozen to a dozen sons and daughters, might emigrate to advantage to the cheap and fertile lands of the West, making themselves sure before they leave, that their pitch is to be made in an eligible position and in a neighborhood where themselves and families may not pine in discontent, and sigh for the associations and enjoyments which they have left.

Men of great enterprise, who have nearly dissipated their means in grasping at too much and becoming rich in a hurry, tempered down to the anticipation of rational gains from rational means, may perhaps better repair their losses and gain property by going to the West than by tarrying in the neighborhood where it will be mortifying to take a position lower than the elevation which was their first starting point.

After all there is an objection weightier than all others, to the removal of the people of New England in mass to the West; and this is, the nearly absolute certainty that all who go there will have to encounter repeated attacks of chills and fevers and severe bilious complaints before they become acclimated. To remove at this time to Michigan or Illinois, Wisconsin or Iowa, there is at least an equal chance that the emigrant will not survive five years. Nay, old as are the settlements of Ohio, the two last persons we have seen from that State returned with the cadaverous, pale faces of apparent consumption. They came back to get their health; and we were happy to be told that although the flesh had retreated until their bodies had become mere skeletons, and the labored perspiration and the glassy eye looked very like a speedy dissolution, they only wanted the fresh mountain air and the pure granite water of rough New England to restore them to perfect health in the course of two or three months. A young gentleman from this county, who had finished a collegiate education and who had been to Ohio two years, met us the day of this present writing "cadaverous and pale." He said Ohio was a fine State, as it undoubtedly is—that it was fertile and flourishing; but he said it was not, after all, what it was represented to be; and that almost all such as went there with raised expectations were disappointed. He had been sick nearly all the time he had been absent, and he thought himself to be so clearly acclimated, that his present intention was again to return to the West, but not to the precise spot where he had suffered, when his health should be restored after his arrival at his own paternal roof in New Hampshire! The case of a worthy physician doing a good business and having accumulated a handsome estate by practising in an extensive reach in a healthy region of the county of Merrimack, is well known to the people of this neighborhood. That physician, before he attained to middle age, sold his stand and farm, removed with his wife and family, and settled down at Peoria in Illinois, where in the course of a single year he took the lead of all others in his profession: he had here extensive business, more than he could attend to. He was called in all directions by night and by day, for every body was sick and needed medicine. But he soon took the disease himself, and others in his family were attacked; his brief career was arrested, and a few short months witnessed the committal of both husband and wife to an untimely grave.

If no other objection than the diseases which are almost sure to attack the emigrant to all new settlements of the West existed, this alone would induce all such inhabitants of New England as now enjoy tolerable competence and prosperity, to pause before they changed their position. But, as the writer we have quoted, has attributed to us the individual reason of contentment with remaining in New England, with that reason existing in his own fancy alone—a reason that we possess resources to purchase "the abundant products of the West" from means not participated by the farmer and laborers generally—we do not hesitate here to take the broad ground that the men who have *not abundance*, the small farmer who is not free and independent, and the person who labors at day's works for his daily bread, have a better chance for obtaining a livelihood and the means of enjoyment, to remain where they are, than they do to remove to the West, even to the cheap and fertile alluvion bottoms of the Wabash. While we have no disposition to condemn the "bold and enterprising" who remove there, we cannot admit the sequence that all who do not go there are "timid and faint-hearted." The man who refuses a challenge to a duel may be stigmatised as timid, when it will require a greater degree of moral courage to repress than to indulge the passion for fight. So the man who encounters and overcomes all obstacles at home and advances to wealth by his own exertions in a country so unpromising as this, may claim credit for at least equal courage and enterprise with him who makes a dash at the far West, in the prospect that a rich and fertile soil will at once give him competence without the necessity for further effort or enterprise.

If five years' industry and exertion are only necessary to make a man independent in the valley of the Wabash, is the writer quite sure that an equal effort will not do as much in many parts of New England? The face of the whole country is so inviting, that like the discontented cow or ox turned into a new and abundant field, the men who occupy the soil for its products, bite a little here and there, and roam from place to place, not satisfied with the abundance before them, but looking for a greater abundance at points not yet reached. In almost all directions—in New England itself when the forest is first cut down—the ground teems with production; it yields abundantly for a few years. This spontaneous abundance cannot always continue without compensation is made to mother earth for the successive crops taken from her bosom. The great misfortune of our agriculture has been, and is likely to be, that the richness of the primitive soil leads to a course of cultivation which is sure to end in sterility. Discouragement, if not abandonment, follows this sterility: the occupant is presented with a strong inducement to leave the ground no longer productive to occupy other ground which will yield more abundantly.

Repeated experiment has proved, that to the industrious and enterprising, the deteriorating method of cultivation is not the true policy: those gain the most who by the product and application of manures keep up the original richness of the soil.—Even for present profit, more is gained in proportion to the labor, from well prepared ground, kept rich by fertilising manures. There are various substances besides mere animal and vegetable manures that may enrich the soil—there are calcareous substances, partaking of the nature of lime, which merely act on the soil without imparting any internal fertility—there are kinds of earth mixed with other kinds of earth having a similar effect. The discoveries of science, the development of the constituents of different soils by analyzation, may hereafter enable every farmer to decide at once what is the best ingredient for his particular location.

A change in New England cultivation, begun several years ago in some places near the seaboard, is rapidly extending to the interior. It is found that our soil may be made to produce ten times as much as it has produced; and the secret has gone abroad that *those farmers make the most money from their labor who most fertilize the soil which they cultivate.*

The examples of Indian corn crops upon the islands of Winnipisscogee lake in New Hampshire, challenge competition with the crops even in the fertile regions of the valley of the Wabash. There is no danger that the population of New England will become too compact or too numerous. The growth of commercial and manufacturing towns will create a necessity for improved agriculture everywhere within the reach of those towns. Create a demand for the productions of the earth beyond the present supply, and there will always be found sufficient enterprise in the New England population to progress in the march of improvement. When the abundant tracks of land now neglected shall be brought into use by all the improvements of which they are susceptible, no fancied fertile elysium of a distant country can tempt away from their homes the intelligent population, who are already reaping the benefits of their own perseverance and industry.

The West is destined to flourish, as well by a natural and proper emigration from the eastern States as from acquisitions of emigrants from Europe and other foreign lands: its more legitimate increase will, however, be from the reproduction of its present population. The Atlantic States, particularly the States of New England, now stand at a point presenting the strongest inducements and the greatest encouragements to that bold enterprise which deserves success because it always earns it. Our young men will find the prospect of success equally auspicious here as in any other part of the world; and those only will leave us from discontent who wish to make money by their wits rather than by productive industry."

USE OF BRANCHES AND LEAVES OF TREES FOR MANURING LANDS.

[*Translated from Le Cultivateur, by Charles H. B. Breck, for the N. E. Farmer.*]

The leaves of the chesnut, walnut and horse chesnut trees, and even those of the linden tree, if raked up as soon as they fall, and placed around the roots of vines or any trees, will decay in course of time, and form a manure, the strength of which will last many years. Those of the walnut and chesnut are best. With these last the burrs can be also gathered up, which increases the bulk and does not harm the quality of the manure; it will become more powerful if a little ashes, lime, or dung of birds is mixed with it. The whole should be covered with a little earth, to prevent the wind from scattering the leaves; oak leaves should not be used in this way, because it has been observed that the places where the wind had gathered a certain quantity of them, are very sterile.

I have remarked that leaves ought to be gathered immediately after their fall, otherwise the rains or frost would cause them to lose their good quality.

The leaves of willows, osiers, &c., make doubtless, a good manure, since the land on which they grow is made fertile by them; but it is hardly possible to use them, on account of the difficulty of obtaining them from the water and marshes, and also of drying them sufficiently. Leaves of walnut and chesnut trees can be easily obtained. The manure is much sooner formed, and easier to spread than straw manure; much of it is used in Limousin, where chesnut trees are very common.

It was customary to spread a large quantity of these leaves at the entrance of stables, and in the yards where the cattle were kept, as well as in the gutters by the sides of roads. The successive washings and triturations form in course of time an excellent mould from this kind of gatherings; care should be taken to gather them up in heaps at the close of winter, to prevent the strength from draining or washing away. This mould is very excellent for light lands and gardens; one can almost see the vegetables grow in it.

Every one knows that the chips from joiners' shops, branches of all kinds of wood, old stumps smouldered and decayed, form a very good mould. This resource can only be had in countries where forests are very common, otherwise it costs too much.

Another kind of manure is obtained from the trimmings which are cut from the trees in the summer, during the abundance of leaves. The branches covered with leaves, when half withered, if placed around the roots of vines or trees, the earth being removed a little for them, and covered again with the same, will produce a fine effect, which will last many years. The owners of woods ought to be eager to profit by this indication, which experience has shown to be such an advantage, and that it is always good to prune trees during the summer.

For the New England Farmer.

CUTTING OF STALKS.

Several writers have, within a few years, recommended to let corn stalks stand until harvest, and then take all together. They say the corn will weigh more, and that it is not more work to harvest the crop than when the stalks are cut. The corn may be a little heavier; but suppose it is, that advantage is more than counterbalanced by the extra labor caused by the stalks not being cut, besides a loss of valuable fodder. I have, in several instances, had a frost take a part of my corn before the stalks were cut, so as to kill the leaves, but not to injure the corn, and did not cut the stalks; and have, in every instance, found that it cost more to harvest the crop, than to cut the stalks and secure them, and then harvest the corn; that is, it is cheaper to secure them separately, than to take both at once. When stalks and corn are cut both at once they are too bulky, and it takes much more room to secure them than to take the stalks off first, and bind them in bundles.

Curing of Stalks.—It is a favorite method with some, to bind their stalks as soon as they think they will do, and immediately secure them under cover, and hang or set them up in an airy place. So managed, they look very nice, but do cattle like them best? This is what we want. Now it is a fact I have learned from actual experiment, that housing them is not the better way, but another way is better, as any man's cattle will tell him, if he will but try it. It is this—the next day after the stalks are cut, when the leaves are not so dry as to crumble, bind them in small bundles, and then shock them, or as it is called where I live, *pike* them—which is to set eight or ten bundles or such number as appears to be suitable to make a pike of proper shape to shed rain, on their butts—draw their tops together and cap with two bundles—when they are sufficiently dried to keep, put them into some building, and if the butts are too green, place the bundles to stand with the butts upwards. In this way my cattle prefer them to any other: there is a sweetness in them that cannot be had when dried in a building.

Mixing of Corn.—Here I shall differ from all that I have ever read, or heard spoken on this subject. The common opinion is, that the blossom on the top stalk falls on the end of the ear, and causes the mixture. This seems to me to be hardly possible, when it is considered that the silk, as it is called, lops down, as soon as it has grown beyond the length of the ears, and also that it is not probable that one blossom in a thousand, or the farina, lodges on the end of the ear. My theory, and *I believe* it to be the true one is, that there is a silk from the bottom, that is, next the cobb, of every kernel o corn: the silk is hollow—a tube, so to express it. Go into a field with a good glass, when this gendering takes place, and I believe there will be seen a vapor, or myriads of vapors, resembling so many spiders' webs, leading in all directions, from the top stalks to the ends of the ears—I saw it once with my naked eye. This, in my poor opinion, is the way in which corn mixes,—it is by sympathy, or attraction, or whatever name the learned may call it by.

By my observation, corn seldom mixes more than two rows each way, when two kinds or colors are planted side by side—whereas if it were done by the blossom falling on the ear, I see not why it might not mix for a much greater distance, by the wind blowing the blossoms. A Farmer.

Dec. 23, 1839.

Frost-bitten Potatoes.—Thomas Dallas has published some very important observations upon the modes of treating potatoes which have been affected by the frost. With us such potatoes are rejected, as being unfit either for food or for furnishing fecula. The able agriculturist above mentioned, considers them in three different states—1st, when they are slightly touched by the frost; 2d, when the outer portion of their substance is frozen; and 3d, when they are frozen throughout.

In the first case he finds that nothing more is necessary, than to sprinkle the roots with lime to absorb the water formed under the skin, which would speedily occasion their complete decomposition. In the second instance he causes the potatoes to be pared and thrown for some hours into water slightly salted. When the potatoes are completely frozen, he finds them to yield, upon distillation, a spirituous liquor resembling the best rum, and affording much more alcohol, and that of a better quality, than can be procured from the roots before freezing.—*Chaptal.*

Preservation of Grains.—The preservation of grains has always been an object of much consideration both to governments and agriculturists, and it is a peculiarly interesting one, because bread forms so large a portion of the nourishment of Europeans, and because the scarcity and high price of it have been the cause or the pretext for popular discontents and insurrections.

It appears that the people of the most ancient times preserved their grains uninjured through several years, merely by secluding them entirely from the action of air and moisture.

The Chinese have from time immemorial preserved their grains in pits, which they call *teon*: these ditches are either hewn out in rocks, free from chinks and humidity, or what is still better, they are dug in a firm, dry soil. If there be any danger of humidity about the pits, they are lined with straw, or wood is burned in them to harden and dry the earth. The grain is not put into the pits till some months after the harvest, nor till it has been well dried in the sun; it is then covered over with mats made of the chaff of the grain or of straw, and this again by a bed of earth well beaten down that it may not be penetrated by water.

Varro, Columella, and Pliny inform us, that the ancients preserved their grain in ditches hollowed out of rocks or dug in the earth, the sides of them being lined with straw. Quintius Curtius relates that the army of Alexander experienced great privation upon the banks of the Oxus, because the inhabitants of the country preserved their corn in subterranean pits, the situation of which was known only to those who dug them.

In some warm and dry countries, it has been customary from time immemorial to preserve grain with less precaution certainly than in the granaries above described, but in situations where it could be kept for six or seven years. Prosper Alpinus relates, that not far from Cairo there was a high wall built, enclosing a spot of ground of about two miles in circumference, which was filled every six or seven years with heaps of wheat: he adds, that the abundant dews of night softened the outer portions of the grain and caused it to germinate, but that in a short time the sun dried the young shoots, which then formed a hard covering to the mass, and did not permit either air or moisture to penetrate it. In a similar manner individuals may preserve their grain upon floors in the open air, merely by covering the heaps of it with mats.—*Ibid.*

Let those who despair of improvement in agriculture, compare the present with the past, and all reasons for disbelief will vanish. Nature herself is improved by man—of this the apple, peach, and potato are present witnesses.—*Genesee Far.*

From the Journal of the English Agricultural Society.

PRESENT STATE OF THE SCIENCE OF AGRICULTURE IN ENGLAND.

Though the national importance of husbandry will be at once admitted by every one, it may be well at the outset of our undertaking not to content ourselves with a general notion of that importance, but to look for a moment at some of the items which constitute its annual value.

The wheat produced in England and Wales is estimated by Mr Mac Culloch, one year with another, at 12,350,000 quarters. This single head of produce, therefore, at an average price of 50*s*., will amount to nearly 31 millions pounds sterling, yearly. The oats and beans have been reckoned at 13,500,000 quarters, and will give another head of 17 1-2 millions sterling per annum. The grass lands, again, are supposed to yield, year by year, produce worth very nearly 60 millions sterling—(59,500,000.) The practical inference to be drawn from these large numbers is obviously this,—that, if by any improved process, it be possible to add even in a small proportion to the average acreable produce either of arable or pasture land, this increase, small as it may seem, may be in fact a very large addition to our national wealth. The average produce of wheat, for instance, is stated at 26 bushels per acre: if by a better selection of seed, we could raise this amount to 27 bushels only, (a supposition by no means unlikely, we should by this apparently small improvement, have added to the nation's annual income 475,000 quarters of wheat, worth, at 50*s*., about 1,200,000*l*. yearly, which would be equal to a capital of 24 millions sterling gained for ever to the country by this trifling increase in the growth of one article alone, and that in England and Wales only.

But it is not merely with regard to the total of any branch of produce that numbers afford a striking result. The value of one crop of a single article of produce on an individual farm may be large, and the loss of that crop very serious; and since in the improvement of agriculture we have to look, unfortunately, at least as much to the prevention of loss as to the increase of profit, it may be worth while on this head to take an instance from a vegetable of seemingly inferior value, the turnip.

It is well known that in the south of England, during two or three dry summers preceding the last, many farmers have lost nearly the whole of their turnip crops; and that by the drought and the ravages of their accustomed foe, the turnip fly only, independently altogether of their new enemy, the black caterpillar: after repeated sowings, a crop came up, but so late in the year, that, for want of warmth, little or no root was formed, and the crop could not be valued at more than 1*l*. an acre. In the north, on the other hand, where farm-yard manure is liberally given to this crop, and carefully applied in the ridges on which the seed is drilled in immediate contact with it, where bone dust is also purchased for the same purpose, on such highly cultivated ground there would be far less risk of failure arising from the ordinary causes mentioned above. There is many a light-land farm in the south of England, of 500 acres, on which 100 acres have not produced turnips worth more than 200*l*. or 300*l*., while the more spirited culture actually practised in Yorkshire might have yielded 20 tons of Swedes or 30 tons of turnips from each acre. It is difficult to reduce the advantages of this superior yield to a money value. At the price for which the former roots have sold in one neighborhood we are acquainted with, a high price it is admitted, but still one that has been paid for many years, they would have been worth 2000*l*.: so that the difference in the result of the two practices would be 1500*l*.; or, if an acre of the land be worth 1*l*. yearly, a difference of produce from one-fifth only of the farm amounting to three times the rent of the whole. Without insisting, however, upon this case which is an extreme one, the following quotation from a recent statistical work, will be sufficient for all practical farmers: "The produce of turnips when cultivated in the broadcast manner, varies from 5 to 15 tons an acre; the latter being reckoned a very good crop. In Northumberland and Berwickshire, a good crop of white globe turnips, drilled, weighs from 25 to 30 tons, the Yellow, and the Ruta Baga, or Swedish, a few tons less."

We may consider, in another point of view, the national effect which might result from a general improvement of agriculture: that is, the additional employment that would arise from any general effort made on the part of the landowner or the tenant to improve permanently, as by drainage, for instance, the texture itself of the soil: we do not mean of waste ground, but of that which is already and has been perhaps for centuries, in course of cultivation. If a pound, only, were thus laid out on each acre, (a very moderate supposition,) we shall find that, since there are 48 millions of cultivated acres in Great Britain and Ireland, a demand for country labor amounting to 48 millions sterling would thus be created; a demand exceeding that which the railroad bills professed to create in the session before last, and far more advantageous in its effect on the laborers, inasmuch as the demand would be a gradual one, not severing them from their homes and their families. The assumed outlay, however, of a pound only, for the permanent improvement of each acre, is probably far too low; 3*l*., 4*l*., or even 5*l*., would be scarcely too much. There is much wet land on which 8*l*. or perhaps 10*l*. might be laid out to advantage; but at 4*l*. only, the new progressive demand for the villager's only commodity, the work of his hands, would be about 200 millions. So large an outlay as this last must indeed, in part, be necessarily deferred for a long course of years; but in whatever degree it may arise, it has, on the other hand, the further advantage arising from the nature of the work to be done, that the demand would necessarily take place in the winter months, when labor is most difficult to be obtained, not in the summer, when the crops are in progress, and the laborer finds already sufficient employment.

It would be an inquiry of much importance to investigate in detail the manner in which this permanent improvement of the soil might be conducted in the various districts of England, but the subject is so extensive that it requires to be handled separately; or, rather, it must be a leading object of our members' future inquiries, to collect such facts and make such trials as may give a solid answer to so extensive a question. Great assistance may doubtless be derived from the knowledge which geological maps have lately afforded us as to the general outlines of the various subsoils which lie immediately under the surface of our fields, and powerfully affect, as every practical farmer knows, the produce of the upper soil through which alone the plough usually passes. These beds of sand, stone, or clay, cross England in irregular courses, from southwest to northeast: the blue lias, for instance, from Charmouth in Dorsetshire, to Whitby Yorkshire; and thus, by the help of a geological map, it might be known that a mode of improvement which had been well tested on a farm in Dorsetshire, would be applicable, due allowance being made for difference of climate, to another in Yorkshire. Manifest, however, as is the assistance that might long since have been derived by agriculture from geology, we know no book which has endeavored until very recently* to secure that kindred aid for the science which is the immediate object of our society's labors. But, although it is impossible to follow this question of the permanent improvement of soils into all its details, it may not be amiss to look for a moment at its more general features; bearing in mind, that we are not now seeking for positive conclusions on which we would recommend that immediate outlay should be made on a large scale by practical farmers, but are endeavoring, as is the business of societies which desire to enlarge the bounds of actual knowledge, to obtain such a bird's-eye view of the field of inquiry as may show us what are the lines by which we may best hope to effect our advance into a country we desire to explore. All subsoils, then, as has been said, may be roughly divided into clays, sands stones—or rather the clayey, sandy, and stony: in the two former of which, the upper soil generally partakes of their mechanical nature, that is to say, the soil resting on clay will probably be close, and on sand loose; while in all the three it will chemically partake more or less the subsoil's nature, that is, its substance will usually resemble, more or less, the bed on which it rests, for the plain reason, that it has partly been formed by the wearing and breaking up of that bed. Where sand predominates in the soil and subsoil, thin veins of clay are not of unusual occurrence in the latter, and where these are found they may be turned to great advantage; but to all sandy ground the Flemings have long applied a method of singular perseverance and proved success, which is shortly as follows. They dig trenches of rather more than a foot in width, and about a foot deep, over their field, at such a distance from each other that the intervals or lands between them are five times the width of the trench, from the bottom of which, assuming the soil to be ten inches deep, they have therefore dug up besides two inches of subsoil, and as they proceed they fling the whole over each land on which the seed has been previously sown, which they thus cover. The trench, being shifted sideways each year, and the same process renewed, at the end of six years two inches of the whole subsoil will clearly have been mixed with the upper surface, and the soil deepened by that amount. The original trench is then dug perhaps two inches lower, and at the end of another six years two more inches, at least, of depth, will have been gained. In this way, after four or five courses of trenching, that is to say, after twentyfour or thirty years, the soil is brought to a depth of 18 or 20 inches of uniform quality.† Nor does the industrious Fleming fold his arms when this labor of life has been accomplished. The bed of mould into which he has converted the natural ground is preserved by similar toil. On a farm called Vollander, a little beyond Courtray, consisting of about 140 acres, the

*In 1837 Mr John Morton had the merit of publishing a work on the application of geology to agriculture.

†See Flemish Husbandry, by the Rev. W. Rham, p. 71—Library of Useful Knowledge.

Rev. Mr Rham went over a field of 106 acres, the whole of which has been repeatedly trenched, by the present occupier we imagine, to the depth of two or three feet.

(To be continued.)

From the New York Observer.

DR. HUMPHREY'S THOUGHTS ON EDUCATION.

Qualifications of Teachers.

(Continued.)

I remark again, that a school teacher should be a person of the *most pure and elevated moral character ;* without a stain and above suspicion. The thought of committing the children of twenty Christian families to the care of a profane man, of an intemperate man, or of a dishonest man, is monstrous ; and I am happy to know that the moral sense of the community revolts at it. However great the moral delinquencies of some parents may be, there are few, I trust, in the land, who would be willing to employ a schoolmaster of bad character. I can remember the time, however, when dissipated men of bright parts and superior education, were more or less employed, even in New England. The teacher (more commonly a foreigner,) would go from the dram-shop to the school-house, and from the school-house to the dram-shop ; and many a luckless boy was paid for it with the birch and the ferule. That time I hope and trust has gone by. I will not allow myself to believe that an intemperate, or an otherwise decidedly immoral schoolmaster, could find a place any where, upon a hundred leagues of territory.

But are not some districts even now, too careless in this matter? Is the moral standard everywhere as high as it ought to be? Are the most ample credentials always required? Are not some men found in the schools, every winter, who are employed rather out of compassion for their families, or from motives of economy, than from any great confidence in their moral qualifications? Every school teacher ought to be a pattern of "whatsoever things are pure, lovely, and of good report," as well as able in every branch of instruction. Nor is it sufficient that a master keep himself within the rules of propriety, during the continuance of his school. If he is chargeable with any plain violation of the decalogue, with any looseness of morality while he is engaged in other pursuits, he is thereby disqualified for the responsible duties of a public teacher. If it is known that he sometimes uses profane language, or that he does not strictly regard the Sabbath, whether at home or abroad ; or that he is ever in the slightest degree disguised with strong drink—any such delinquency is a disqualification for the office of instructer. Children are quite too strongly inclined, at the best, to stray in forbidden paths, and they need all the force of precept and example, both in the family and in the school, to keep them "in the way they should go." How mischievous, then, how ruinous must be the influence of a popular school-master, who carries about with him the slightest blemish in his moral character. I shall only add,

In the last place, that *sincere vital piety* is an exceedingly desirable qualification in a school-teacher. There is nothing like the fear and love of God shed abroad in the heart, to make a man faithful in any profession, employment or undertaking. As Moses said, when the spirit of prophecy was given to the seventy elders in the wilderness, "would that all the Lord's people were prophets, and that the Lord would put his spirit upon them" ; so I cannot help exclaiming, in this place, would that all the teachers of our schools were themselves taught of God, and that "the Lord would put his spirit upon them." Parents need all the assistance they can get, in bringing up their children in the nurture and admonition of the Lord, and there is no calculating the amount of influence which a truly pious schoolmaster or mistress may exert, over the hearts and consciences of fifty immortal beings, during the most plastic period of their existence. A sincerely religious teacher will make it a prominent object, to lead his scholars in the paths of righteousness, as well as to imbue their minds with the rudiments of useful knowledge ; and it admits not of a doubt that the seeds of piety sown in the humble school-house, have taken root and sprung up in the hearts of thousands, putting forth "first the blade, then the ear, and after that the full corn in the ear."

I am quite aware, that piety in the absence of other qualifications, cannot make a good school-teacher any more than it can make a good civil ruler, a good preacher, or a good physician. And it is certain, that some men of sound Christian principles and high moral standing, though not members of the church, are upon the whole far better teachers than some others, whose piety is unquestioned and unquestionable. I do not say, therefore, that none but professors of religion should be employed. The number of such who are otherwise competent, is very inadequate, at least in some parts of the country ; and we are bound to be thankful for the best talents and qualifications we can command. Still, other things being equal, vital piety is a crowning excellence in the character of a teacher ; and I hold it to be the bounden duty of Christian parents to inquire for such teachers ; and to give them the preference when they can be had. This may appear to some quite too puritanical for the present liberal and enlightened age ; but I feel confident that a still better age will ratify the judgment ; and that no parent in the light of eternity, will ever find reason to regret that he was too anxious or particular, about the moral and Christian character of those to whom he confided the education of his children.

THE LIFE OF THE HUSBANDMAN.

"I am a true laborer. I can earn that I eat, get what I wear, owe no man hate, envy no man's happiness—glad of other men's good—content with my farm ; and the greatest of my pride is to see my ewes graze and my lambs suck."—SHAKSPEARE.

We have come to the conclusion that Nature's truest nobleman is the man who earns his bread by the sweat of his face, upon his own bought and paid for plantation. An independent farmer may stand upon his own house-top and say to himself, as Selkirk did—

"I am monarch of all I survey,
My right there is none to dispute ;
From the centre all round to the sea,
I am lord of the fowl and the brute."

He is truly a rich monarch—with a landed title more secure than that of feudal lord or baron—more easily preserved and protected, not by deeds of valor, and through the shedding of blood, but by the lawful labor of the hands. His house is his castle ; his acres his dominions. His gardens are his parks, his grass plats his lawns, and his forests his groves. His cattle, sheep, and poultry are his subjects, and he becomes at pleasure, either the executioner or the multiplier of such subjects. Tell us if the king upon his throne has more power worth possessing. His happiness we know is less, as he increases toils, cares, and his sorrows in proportion as the cultivator of the soil diminishes his.

In the spring time he sows, in the autumn he reaps. Providence has assured him that spring time shall not fail, and he has the assurance of the Giver of every good and perfect gift, that as he sows, so shall he reap. His grounds are watered in the season of drought with the rains and dews of heaven, and in the damp season the sun shines to cheer, invigorate, and give promise to his labors. The severer tasks of the summer are succeeded by the lighter labors of the winter. As we have said, in the words of Will Shakspeare, "he earns that he eats, and gets what he wears." He may say truly, and with an honest pride—

"I eat my own lamb,
My chickens and ham,
I shear my own fleece and I wear it."

What could a man want more? and how can a farmer, capable of enjoying life, possessed of his farm-house, his farm, and his necessary implements of husbandry, ever sigh for a residence within the enclosure of a city—choosing bricks and mortar for the elbow room of a spacious farm-house,—the dust of the town for a village ; the three-story brick house for the granary or the haycock ; for the purest air of heaven, the atmosphere of a thousand unwholesome smoky houses, and ten thousand unwholesome breaths? How could a farmer make such a choice as this? We would pause for a reply, did we not know that the only answer which could be devised, after a long study, would be the unsatisfactory one that something better was anticipated only : for it would be a miracle, almost, for a man to find himself happier or in better circumstances after a change of residence from the country to the city. No, no. The true elysium ; the real paradise on earth, is the country—the green, fruitful, beautiful country. The city for the task-master and his hard-working servant ; but the country for the man who wishes for health and leisure, contentment and a long life.

The ancient Romans venerated the plough, and at the earliest, purest time of the Republic, the greatest praise which could be given to an illustrative character, was a judicious and industrious husbandman.—*Portland Adv.*

HINTS.—Do not say when you put a crop on a piece of land not adapted to it, or but imperfectly prepared, that circumstances rendered it necessary. Napoleon believed that calculating forethought and an energetic will, created the circumstances for the man, not the man for the circumstances. The man has little pretention to the character of a farmer, whose plans for the culture of his several fields are not made at least two years in advance.

Those men are always found to complain the most of hard times and high prices, who add the least to the productive resources of the country.—The farmer, who by his labor creates value from the earth, rarely complains, and need never, if he diligently follows the plough. Let those who complain, remember there is an infallible cure for hard times—honest industry applied to the cultivation of the earth.—*Genesee Far.*

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

BOSTON, WEDNESDAY, JANUARY 1, 1840.

We give below the opinion of Judge C——, in a case recently submitted. As it is the first judicial decision which he has ever delivered from the bench, and as he has been obliged to be his own reporter, he hopes any legal inaccuracy will be pardoned. We hope the principles of law will be found true and sound.

DECISION IN A CONTESTED CASE.

———, *Nov. 18th*, 1839.

DEAR SIR—As the season of the year has now arrived in which the cultivators of the wheat crop throughout our commonwealth are engaged in making out their certificates for the bounty on the same, I am desirous that a better understanding should be had, not only for myself but for the benefit of others who may be engaged in the cultivation of the crop, with regard to the true intent of the law in certain cases (which not unfrequently occur,) between the person who cultivates the crop and the owner of the land. I will state a case in which I am one of the parties:—Late in the fall of 1837, having received a quantity of Italian wheat from a friend in the State of New York, which at that time had not been cultivated amongst us, I was induced to apply to a neighbor of mine for a piece of ground, for which I agreed to pay three-fifths of what I could raise, as a compensation for the use of the land. I accordingly ploughed my ground the same fall, (being of a rich loam soil,) and on the 13th of April following (against the advice and opinion of the owner of the land upon early sowing,) I prepared my seed, by soaking it twelve hours in brine, preparatory to rolling it in lime, and sowed it one and a half bushel per acre, immediately after which the ground froze sufficiently hard to bear up an ox. At the season of the year when the heads began to appear, lime was sown on broadcast, at the rate of one bushel per acre, to prevent the work of the weavil. I harvested the wheat when ripe (three acres,) which produced about 23 bushels per acre: three-fifths of it I paid over to the owner of the land, as agreed on: I then made out my certificate for the *whole crop*, (70 bushels,) stating the manner of procedure in the management of the land, &c., agreeably to the requirements of the law in such cases, making oath to the same, and presented the same to the Treasurer for allowance. Immediately after, the owner of the land made out a second certificate for three-fifths of the crop; made oath to the same and presented it to the Treasurer, and demanded a bounty, (as I had not at that time received my bounty, it not being convenient,) the Treasurer actually paid to the land-*holder* a bounty on the three-fifths (or 42 bushels,) of two dollars on the first 15 bushels, and five cents for every additional bushel; accordingly when I called for my bounty on the whole crop, the Treasurer refused to pay me bounty for more than two-fifths or 28 bushels, two dollars for the first 15 bushels and five cents for every additional bushel, making a second bounty of two dollars *in one case*. Now it appears to me, that either myself or the commonwealth or both, have been *wronged*. As lands are frequently let in this manner, I am induced to address you on this subject, and most respectfully to ask your opinion as to the true intention of the *law* in such cases, and have the goodness to publish the same in the New England Farmer. Please send me a copy, and you will confer a favor.

Most respectfully, yours, &c. ———.

REV. HENRY COLMAN.

The foregoing letter has been sometime, in company with others, waiting our return to winter quarters; and our absence must be the apology for apparent neglect. With the writer of the letter, whose name and residence we have left blank, we are acquainted, and believe him incapable of making knowingly any false statement.—Who the other party is, we do not know, even by name. To us, however, if the above is a full statement of the case, the matter is as clear as the light of day.

Contracts are to be interpreted according to the circumstances and conditions under which they are made. It is understood in this case that, at the time of making the contract, no reference was made to the bounty which might be obtained from the State upon the crop. The law indeed was not in existence at that time.—There was no agreement between the parties that the owner of the land should receive any part of the bounty if any bounty should be obtained; nor on the other hand that he should furnish any part of the seed, or perform any part of the labor of cultivation or harvesting; or bear any part of the expense or loss in case of a failure of the crop. The simple condition was that the lessee should pay to the owner of the land three-fifths of the crop grown upon the land that season. It was understood of course that the land was to be cultivated; and it was naturally inferred that the interests of the lessee would induce him to cultivate the land with the most profitable crop and in the best manner. Indeed, as the land was leased upon the presumption and understanding that it would be cultivated, had the lessee after hiring the land, neglected to cultivate it, we should have considered that the owner of the land had a just claim upon him to the full amount of what might be considered the fair rent of such land. But in a case, as in this, where the land was cultivated, and cultivated as it was expected by the parties it would be cultivated, both as to the kind of crop raised and the manner of growing it, the owner of the land has a claim only for that which was stipulated as the rent, and for nothing more; that is for three-fifths of what was grown upon that land that season, and this payable in kind. How this should be paid, whether in the sheaf or threshed and cleaned, must depend altogether upon agreement at the time; or upon usage in such cases, if no agreement were made. So too in regard to the straw, as the agreement was that the owner should have three-fifths of *what was raised on the land*, three-fifths of the straw belong to the owner, unless general usage establishes a contrary rule, or some express stipulation was made on the subject at the time of contracting. We suppose, however, that in this case the operation on the part of the lessee was not considered as completed until the crop was actually prepared for use or market; in which case the contract would be fulfilled on the part of the lessee by the delivery of three-fifths of the cleaned grain.

If, again, in the progress of the operation it should appear that the lessee wilfully or negligently failed to cultivate the whole ground; or used seed which he knew to be imperfect or bad; or, through neglect, allowed his crops to be exposed to the depredations of cattle or vermin; or if a wheat or rye crop were grown, the lessee without the consent of the owner cut any portion of the standing crop while in a green state for fodder, or for bonnet straw, in all these respects the owner of the land would have a just claim upon the lessee for such damages as he might fairly prove he had sustained by such neglect or unexpected appropriation of the proceeds of the land.

The question of the right of the owner to any portion of the bounty of the State awarded upon the crop, involves in our opinion, after the views above given, no difficulty whatever. If the agreement had been that the owner should be entitled to three-fifths of "*what could be made*" in the course of the season from the land, there would have been a fair claim on the part of the owner to three-fifths of the bounty of the State. But it was not so. The lessee agreed to pay to the owner of the land as rent three-fifths of *what he should raise* upon it. This of course was in kind, unless an agreement was made to the contrary at the time of contracting, which is not pretended. Seventy bushels of wheat it seems were produced on the three acres of land. The owner, therefore, was entitled to fortytwo bushels of the wheat raised and to nothing more, with the exception of conditions in respect to the straw above referred to.

The law authorising a bounty upon wheat expressly states that this bounty shall be paid to the "person who raises or causes to be raised" wheat to a certain amount therein specified. Now with what propriety can it be said that the owner of the land in this case either *raised or caused to be raised* a crop of wheat when he did nothing towards the cultivation of the crop; nor as appears, if all the facts in the case are given in the letter, so much as determined what kind of crop should be cultivated on the leased land. For a man, therefore, under these circumstances to go before a magistrate and make oath with a view to obtaining the bounty, that he either *raised or caused to be raised*, is as clear a case of false swearing as ever appears in our courts. The terms of the certificate given under oath are "I have raised," &c. The oath in this case may have been taken without a proper regard to the nature of the case; but this does not alter its character.

Again, the object of the law was to encourage the cultivation of wheat in the State; to ascertain the capacities of the soil for its production; and by a careful observation of its growth and progress, to determine the best mode of cultivating this valuable crop. For whom then was this bounty designed but for the actual cultivator of the crop? under whose particular direction, skill, intelligence and care, the cultivation was undertaken and carried on, and to no one else. Certainly not to the owner of a tract of land, who merely leases it for a fixed rent without even stipulating what crop should be cultivated upon it.

The bounty proffered is altogether accidental, and extraneous, and in the absence of all stipulation in respect to it at the time of making the contract, the owner has no claims upon it whatever, but it belongs to the cultivator.

Suppose the owner of a ship should charter his vessel to an enterprising individual for a year, upon a stipulation that three-fifths of any cargo she should bring home should belong to the owner, to be paid as charter money. The government with a view of encouraging enterprise and ascertaining whether a productive trade can be carried on with China, engage to give a bounty of fifty cents upon every pound of silk brought from Canton into the country. If the person who charters the ship brings home fifty thousand pounds of silk, then he must pay the owner thirty thousand pounds of silk. But the owner of the ship has no claims upon the bounty of the government, which was a bounty not for owning or building or freighting ships, but upon the enterprise and labor of bringing silk from China into this country. With this certainty the owner of the ship had nothing to do, since he did not even so much as stipulate that silk should be brought instead of tea or China ware. But let us suppose that instead of granting a bounty upon silk the government, after the voyage had been undertaken, thought best to lay *a duty* upon silk of fifty to eighty per cent., or so heavy as to make the voyage a losing concern to the shipper or freighter. In such case would the owner of the vessel expect to pay the government

duty on his three-fifths of the silk, which he was promised for the hire of his ship. Certainly not; any more than that a creditor would be willing to receive the payment of a debt in the depreciated currency of a broken bank.

To us indeed the case is plain that the owner of the land in this instance has no just claim whatever to any portion of the State bounty—

Let judgment be entered for the defendant. H. C.

THE RHODE ISLAND MEDICINE:

AN INFALLIBLE CURE FOR HARD TIMES AND TROUBLED CONSCIENCES!

We are not in the habit of advertising either quack or patent medicines in the Farmer; but there is no quackery in the subjoined nostrum; and we hope the Rhode Island Society will not think of rendering it exclusive by taking out a patent. Under the *bill*-ious complaints which are prevalent among most classes at the close of the year, we beg leave to recommend the Rhode Island Society's remedy as effectual. We recommend it to our customers in particular, as a certain cure for those disagreeable qualms of conscience, which we know some few of them must feel about this time; and for whose sufferings we feel an unaffected compassion.

"We hereby acknowledge the receipt of one hundred and fifty dollars from the Rhode Island Society for the Encouragement of Domestic Industry, to pay in advance for the New England Farmer, to be distributed among the members of the Society.

JOSEPH BRECK & CO."

ERRATUM.—In Gen. Dearborn's letter on the first page of our last number, first line of second paragraph, for "fine seeds" read five seeds.

BRIGHTON MARKET.—MONDAY, Dec. 30, 1839.

Reported for the New England Farmer.

At Market 630 Beef Cattle, 80 Stores, 1200 Sheep, and 420 Swine.

PRICES.—*Beef Cattle.*—Last week's prices for a like quality were generally sustained. No choice Cattle were at market, consequently our quotations for first quality are reduced. First quality, $6 25. Second quality, $6 00. Third quality, $4 50 a $5 75.

Barrelling Cattle.—Mess $5 50; No. 1 $5 00.

Stores.—Very few sales were effected.

Cows and Calves.—Sales $30, $35, $42, and $46.

Sheep.—Lots were sold at $1 50, $2 25, $2 75, $3 25, $3 75, and $4 50.

Swine.—No lots were sold. A considerable number were retailed from 4 1-2 to 6.

Statement of Brighton Market for 1839.

23,263	Beef Cattle, sales estimated at,	$1,116,624
15,252	Stores,	427,056
95,400	Sheep,	214,650
26,088	Swine,	143,534
		$1,901,864

1838.

25,830	Beef Cattle,	
9,573	Stores,	
104,640	Sheep,	Ssles estimated at, $2,058,004
26,164	Swine,	

1837.

31,644	Beef Cattle,	
16,216	Stores,	
110,206	Sheep,	Sales estimated at, $2,449,231
17,052	Swine,	

1836.

38,504	Beef Cattle,	
11,858	Stores,	
82,830	Sheep,	Sales estimated at, $1,858,202
15,667	Swine,	

1835.

51,096	Beef Cattle,	
15,872	Stores,	
98,160	Sheep,	Sales estimated at, $1,878,032
23,142	Swine,	

WANTED.

From 5 to 10 tons of *Ruta Baga, Mangel Wurtzel and Sugar Beets.* Apply at C. N. HARTSHORN, corner of Washington Street, and Pleasant Street.

Boston, December 13, 1839. 2t

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded Northerly exposure, week ending December 29.

Dec., 1839.	7 A.M.	12, M.	5, P.M.	Wind.
Monday,	23	27	26	N.
Tuesday,	24	28	35	N.
Wednesday,	25	21	32	N.
Thursday,	26	12	27	N.
Friday,	27	15	34	N.
Saturday,	28	37	42	N. E.
Sunday,	29	26	30	W.

VEGETABLE CUTTER.

Willis's New Improved Vegetable Cutter. This machine is calculated for cutting up vegetables and esculent roots for fodder, and is one of the most useful and economical machines that the farmer can use. The subscribers feel great confidence in recommending this machine to the public; they are aware that it has been long wanted and they now offer a machine that cannot fail to give satisfaction upon a fair trial. It will cut with ease from one to two bushels per minute, in the best possible manner, and is not liable to get out of order, being made in the most substantial manner. No farmer should be without one of them. For sale at the Agricultural Warehouse, 51 and 52 North Market Street.

December 18. JOSEPH BRECK & CO.

GREEN'S PATENT STRAW CUTTER.

JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store, Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it very efficiently.

2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.

3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.

4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.

BONE MANURE.

The subscriber informs his friends and the public, that after ten years experience, he is fully convinced that ground bones form the most powerful stimulant that can be applied to the earth as a manure

He keeps constantly on hand a supply of Ground Bone, and solicits the patronage of the agricultural community. Price at the Mill 35 cents per bushel; put up in casks and delivered at any part of the city at 40 cents per bushel, and no charge for casks or carting

Also, ground Oyster Shells

Orders left at the Bone Mill, near Tremont road, in Roxbury, at the New England Agricultural Warehouse and Seed Store, No 52 North Market Street, or through the Post Office will meet with prompt attention

NAHUM WARD.

WELLES'S PREMIUM FOR APPLES.

At a meeting of the Massachusetts Horticultural Society, held in August last, it was

Voted, That a first Premium of *thirty dollars* be awarded on the second Saturday of January, 1840, for the best specimen of Apples, produced on or before that time from seedling trees, which shall have been brought into notice since the year 1829.

That a second Premium of *twenty dollars*, and a third Premium of *ten dollars*, be awarded at the same time for the two next best similar specimens.

That the quantity of each shall not be less than four dozen.

The Committee on Fruits are particularly requested to meet at the Rooms of the Society on Saturday, the 11th day of January next, at 10 o'clock, A. M., for the purpose of awarding the Premiums above mentioned, also for awarding the Premiums on Fruits for the year 1839.

E. M. RICHARDS, *Chairman.*

December 18. 4t

ROHAN POTATOES,

For sale at the New England Agricultural Warehouse and Seed Store, No. 52 North Market Street, at $5 per barrel.

October 16 JOSEPH BRECK & CO.

DOMESTICATED WILD GEESE.

A few pair for sale. Inquire at this office.

November 6.

WHOLESALE PRICES CURRENT.

CORRECTED WITH GREAT CARE, WEEKLY.

		FROM	TO
ALUM, American,	pound	5	5½
ASHES, Pearl, per 100 lbs.		5 25	5 50
Pot, " " "		4 75	5 00
BEANS, white, Foreign,	bushel	1 62	2 00
" " Domestic,	"	2 00	2 00
BEEF, mess,	barrel	14 00	14 50
No. 1.	"	12 00	12 50
prime,	"	10 00	10 50
BEESWAX, white,	pound		
yellow,	"	28	35
BRISTLES, American,	"	35	70
BUTTER, shipping,	"	11	13
dairy,	"	17	20
CANDLES, mould,	"	13	14
dipped,	"		
sperm,	"	40	42
CHEESE, new milk,	pound	10	
CIDER,	dozen	1 50	1 75
refined,	barrel	2 50	4 50
BONE MANURE,	bushel		35
in casks,	"		40
FEATHERS, northern, geese,	pound		
southern, geese,	"	37	46
FLAX, (American)	"	9	12
FISH, Cod, Grand Bank,	quintal	2 37	2 57
Bay, Chaleur,	"	2 20	2 27
Haddock,	"	1 25	1 50
Mackerel, No. 1.	barrel	11 25	11 50
No. 2,	"	9 50	10 00
No. 3,	"	6 00	6 25
Alewives, dry salted, No. 1.	"	6 00	6 25
Salmon, No. 1,	"	22 00	23 00
FLOUR, Genesee, cash,	"	6 37	6 50
Baltimore, Howard street,	"		6 50
Richmond canal,	"		6 37
Alexandria wharf,	"		
Rye,	"	4 00	4 25
MEAL, Indian, in bbls.	"	4 00	4 12
GRAIN: Corn, northern yellow,	bushel		85
southern flat, yellow,	"	70	71
white,	"	64	66
Rye, northern,	"	75	80
Barley,	"	75	80
Oats, northern, (prime)	"	42	45
southern, new,	"	33	35
GRINDSTONES, pr ton of 2000 lbs. rough,		18 00	20 00
do. do. do. finished,		28 00	30 00
HAMS, northern,	pound	9	10
southern and western,	"	7	8
HAY, best English, per ton,		16 00	18 00
Eastern screwed,		10 00	12 00
HOPS, 1st quality,	pound		20
2d quality,	"		18
LARD, Boston,	"		9
southern,	"	7	8
LEATHER, Philadelphia city tannage,	"	29	30
do. country do.	"	25	27
Baltimore city tannage,	"	26	28
do. dry hides,	"	24	25
New York red, light,	"	21	23
Boston, do. slaughter,	"	21	22
Boston dry hides,	"	20	22
LIME, best sort,	cask	85	90
MOLASSES, New Orleans,	gallon	27	30
Sugar House,	"	50	55
OIL, Sperm, Spring,	"	1 10	1 12
Winter,	"		1 20
Whale, refined,	"	50	55
Linseed, American,	"	67	70
Neat's Foot,	"	95	
PLASTER PARIS, per ton of 2200 lbs.		2 87	3 00
PORK, extra clear,	barrel	18 00	
clear,	"	17 00	
Mess,	"	14 00	
Prime,	"	12 00	
Whole Hogs,	pound	5	6
SEEDS: Herd's Grass,	bushel	2 50	3 00
Red Top, southern,	"	60	1 00
northern,	"		1 50
Canary,	"	2 25	2 50
Hemp,	"	2 25	2 50
Flax,	"	1 37	1 62
Red Clover, northern,	pound		
Southern Clover, none,	"		
SOAP, American, Brown,	"	7	8
" Castile,	"	12	13
TALLOW, tried,	"	10	11
TEAZLES, 1st sort,	pr M.	2 50	3 00
WOOL, prime, or Saxony Fleeces,	pound		
American, full blood, washed,	"		
do. 3-4ths do.	"		
do. 1-2 do.	"		
do. 1-4 and common,	"		
Northern pulled: Pulled superfine,	"		
No. 1,	"		
No. 2,	"		
No. 3,	"		

MISCELLANEOUS.

From the Chicago American.

THE FARMER'S CHOICE.

"A little house well filled,
A little wife well willed,
A little land well tilled."

Our ancestors were fed on bread and broth,
And woo'd their healthy wives in home-spun cloth,
Our mothers, nurtur'd at the nodding reel,
Gave all their daughters lessons on the wheel.
Though spinning did not much reduce the waist,
It made the food much sweeter to the taste.
They plied with honest zeal the mop and broom,
And drove the shuttle through the noisy loom.
They never once complained as we do now,
"We have no girl to cook and milk the cow."
Each mother taught her red-cheek'd son and daughter
To bake, to brew, and draw a pail of water;
No damsel shunn'd the wash-tub, broom, or pail,
To keep unsoil'd a long grown finger nail.
They sought no gaudy dress, no wasp-like form,
But ate to live, and work'd to keep them warm.
No idle youth, no tight-laced, mincing fair,
Became a living corpse for want of air;
No fidgets, faintings, fits or frightful blues;
No painful corns from wearing Chinese shoes.

A HOOSIER.

ARNOLD'S ESCAPE.

A correspondent of the Farmer's Monthly Visitor gives the following particulars respecting the escape of the infamous traitor Arnold, which we do not recollect of having before seen:—

Mr Ebenezer Chase was a private in the New Hampshire militia, which relieved the Pennsylvania line at West Point in 1780, when those troops, being veteran, were wanted elsewhere. Mr C. with several others, being off duty, was on the shore of the Hudson when Arnold deserted. When Gen. Washington assigned him the command of West Point, he left his own barge in his possession. A temporary hut was erected on the east shore for the accommodation of the four oarsmen who managed the barge. On the morning of his desertion, Gen. Arnold rode down to the shore, from his head quarters at Robinson's farm, very fast, as was his custom—threw the reins to his attendant, and ordered the barge to be manned. He then directed his course towards the Point; but on reaching the middle of the river, the boat was observed to take a course down stream, and move very swiftly through the water.

The explanation was afterwards made by the boatmen. He hoisted a flag of truce, and told them to pull for the Vulture sloop of war, which lay below, saying that he had some business with her captain, and promised if they would row him down to her as soon as possible, to give them a guinea and a gallon of rum each. On nearing the Vulture, and being within range of her guns, Arnold opened his plan, saying, "I have served the ungrateful scoundrels long enough," and declared if they would go with him they should have double pay, and be made sergeants in the British service. One of the men replied that "he did not understand fighting on both sides." "Then," said the General, "you are prisoners."

When they came along side the sloop of war, Arnold ascended the deck, and was received by the marines with presented arms. He then ordered his men to come on board as prisoners of war. One of them who had been their spokesman just before, said "it was a shabby trick, as they had toiled to their utmost strength to get the boat along, now to refuse the promised reward, and make them prisoners to boot." The English captain heard their murmurs, and stepping forward, observed—"Gen. Arnold, I command this ship, and while I walk the quarter deck, no such transaction shall take place. I know the meaning of my words, sir, and will meet their comment." Then addressing the men, he continued—"My good fellows, I respect your principles and fidelity to your country, although you are enemies to your King. You shall have liberty to go or stay as you please.—"Here," taking them from his purse, "are your guineas: steward put up four gallons of rum for these men." The boatmen thanked the gallant and generous sailor, and returned in safety to head quarters to report their proceedings to Gen. Washington, who had just arrived in camp. Arnold, chagrined and enraged, retired without uttering a word, to the cabin of the sloop of war.

This statement was made by Mr Chase about a fortnight before his death, in 1831.

Arnold, before his escape, had received information that "John Anderson," the name with which he had filled Andre's pass, was taken. The information was sent him by the unfortunate person himself. This determined his purpose for sudden flight. He was afterwards distinguished for the inveteracy with which he carried on his predatory warfare against the property of his fellow countrymen. After the war he went to England, where, although he received the countenance of the British government, his *good intentions* in his unsuccessful plot against the liberty of his country were despised by the British officers. The unfeeling wretch called upon the widowed mother and sister of his unfortunate victim (André.) The servant announced to them the name of Gen. Arnold; and they immediately returned a message that they did not desire to see him. V.

AFFECTION FOR A MOTHER.—Round theidea of one's mother the mind of a man clings with a fond affection. It is the first deep thought stamped upon our infant heart when yet soft and capable of receiving the most profound impressions, and all the after feelings of the world are more or less light in comparison. I do not know that even in our old age we do not look back to that feeling as the sweetest we have through life. Our passions and our wilfulness may lead us far from the object of our filial love; we learn to pain her heart, to oppose her wishes, to violate her commands; we may become wild, headstrong, and angry at her counsels or opposition; but when death has stilled her monitory voice, and nothing but calm memory remains to recapitulate her virtues and good deeds, affection, like a flower beaten to the ground by a past storm, raises up her head and smiles among her tears:—Round the idea, as we have said, the mind clings with fond affection: and even when the earlier period of our loss forces memory to be silent, fancy takes the place of remembrance, and twines the image of our dead parent, with a garland of graces, and beauties, and virtues, which we doubt not she possesses.

A gentleman expatiated on the justice and propriety of an hereditary nobility. "Is it not right," said he, "in order to hand down to posterity the virtues of those who have been eminent for their services to the country, that their posterity should enjoy the honors conferred on them as a reward for such services?" "By the same rule," said a lady, "if a man is hanged for his misdeeds, all his posterity should be hanged too!"

HOUSEHOLD SERVICE OF A DOG.—"I say, stranger," said a cottage urchin to a Yankee pedlar,—"don't you whistle that ere dog away." "Why, he aint no use no how, he's so ugly." "Oh, but he saves heaps of work." "How?" "Why, he always licks the plates and dishes so clean, that they never want washing; and mammy says she wouldn't part with him no how, for our new dog aint got used to mustard yet."

THE RETORT COURTEOUS.—As a waiter was one day igniting a huge pile of pitch pine, in the capacious fire place of the village inn, a gentleman remarked to him,—"Jerry, they say that *fools* make the best fire!" Jerry, with the purest arch respect, turned round to him, and said,—"Will you take the tongs, Sir?"

AMERICA AND RUSSIA.—M. De Tocqueville, in his "Democracy in America," speaks of the destiny of the East and the West in the following manner:

"There are, at the present time, two great nations in the world, which seem to tend towards the same end, although they started from different points. I allude to the Russians and Americans. Both of them have grown up unnoticed; and while the attention of mankind was directed elsewhere, they have suddenly assumed a most prominent place among the nations; and the world learned their existence at almost the same time.

All other nations seem to have nearly reached their natural limits, and only to be charged with the maintenance of their power; but these are still in the act of growth: all the others are stopped, or continue to advance with extreme difficulty; these are proceeding with ease and with celerity along a path to which the human eye can assign no terminus. The American struggles against the natural obstacles which oppose him,—the adversaries of the Russian are men;—the former combats the wilderness and savage life—the latter, civilization with all its weapons and its arts; the conquests of the one are, therefore, gained by the ploughshare; those of the other by the sword. The anglo-American relies upon personal interest to accomplish his ends, and gives free scope to the unguided exertions and common sense of the citizens; the Russian centres all the authority of society in a single arm:—the principal instrument of the former is freedom—of the latter, servitude. Their starting point is different, and their courses are not the same; yet each of them seems to be marked out by the will of Heaven to sway the destinies of half the globe."

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